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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/583,701	06/20/2006	Jeong-Bong Yoon	1455-061830	3249
28289	7590	02/23/2009	EXAMINER	
THE WEBB LAW FIRM, P.C. 700 KOPPERS BUILDING 436 SEVENTH AVENUE PITTSBURGH, PA 15219			YEE, DEBORAH	
			ART UNIT	PAPER NUMBER
			1793	
			MAIL DATE	DELIVERY MODE
			02/23/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/583,701	Applicant(s) YOON ET AL.	
	Examiner Deborah Yee	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 December 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 58-120 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 58-120 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 December 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/07/08</u> . | 6) <input type="checkbox"/> Other: _____ |

Drawings

1. The replacement drawings were received on December 23, 2008 and are approved.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 58 to 120 stands rejected under 35 U.S.C. 103(a) as being unpatentable over WO 2003/031670 to Murakami for the reasons stated in previous office action dated September 24, 2008.
4. Claims 58, 59, 61-67, 90 and 92-98 stand rejected under 35 U.S.C. 103(a) as being unpatentable over IS Patent 5,078,809 to Kinoshita in view of US patent 6,709,419 to Yoshinaga for the reasons stated in previous office action dated September 24, 2008.

Response to Arguments

5. Applicant's arguments and 1.132 Declaration filed December 23, 2008 have been fully considered but they are not persuasive.
6. Regarding Murakami, it is the Examiner's position that prior art examples P and Q provided in Table 11 on page 35 teach all of the claimed elements of the present invention except for higher C content and does not teach MnS and/or CuS precipitates having an average size of $\leq 0.2 \mu\text{m}$ or less. It would, however, be obvious to lower C

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content since prior art teaches a broad C range of 0.0005 to 0.04%. Also precipitation limitation would be expected since composition, ratios and process of making meet or closely meet present invention.

7. Applicant argued that prior art examples P and Q do not contain MnS and/or CuS precipitates having an average size of $\leq 0.2 \mu\text{m}$ because the claimed controlled ratios for Mn, Cu and S are not met. In response to argument, examples P and Q meet the claimed ratios and therefore would meet the claimed precipitation limitation. For instance, when steel comprises Mn and Cu, claim 58 requires the composition of Mn, Cu and S to satisfy the following relationship: $\text{Mn} + \text{Cu} \leq 0.3$ and $2 \leq 0.5 * (\text{Mn} + \text{Cu}) / \text{S} \leq 20$. Hence example P contains 0.04%Mn, 0.011% S and 0.031%Cu; and when calculated, meets the claimed ratios as follows: $\text{Mn} + \text{Cu} = 0.04 + 0.031 = 0.071 \leq 0.30$ and $0.5 * (\text{Mn} + \text{Cu}) / \text{S} = 0.5 * (0.04 + 0.031) / 0.011 = 3.23$. Also example Q contains 0.20% Mn, 0.011%S and 0.045% Cu; and when calculated, meet the claimed ratios as follows: $\text{Mn} + \text{Cu} = 0.2 + 0.045 = 0.245$ and $0.5 * (\text{Mn} + \text{Cu}) / \text{S} = 0.5 * (0.2 + 0.045) / 0.011 = 11.13$

8. Regarding Kinoshita, it is the Examiner's position that prior art examples in table 4 of column 14 teach all of the claimed elements of the present invention except for slightly lower C content and does not teach MnS and/or CuS precipitates having an average size of $\leq 0.2 \mu\text{m}$ or less. It would, however, be obvious to increase C content since prior art teaches an upper limit of 0.003%C. Also precipitation limitation would be expected since composition and process of making are closely met.

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9. Applicant argued that Kinoshita examples do not contain MnS precipitates having an average size of $\leq 0.2 \mu\text{m}$ or less because the claimed controlled ratio for Mn and S is not met. In response to argument, examples in table 4 meet the claimed ratios and therefore meet the claimed precipitation limitation. Note when steel comprises Mn, then claim 58 requires the composition to satisfy the relationship: $0.58*(\text{Mn})/\text{S} \leq 10$. Prior art example 3 contains 0.12%Mn and 0.01% S, and when calculated, the claimed ratio = $0.58*(\text{Mn})/\text{S} = 0.58*(0.12)/0.01 = 6.96$.

10. Regarding Yoshinaga, it is merely a secondary reference to show that small amounts of Mo or Cr are conventionally added to analogous steel alloys to improve bake hardenability and hence would be obvious to incorporate such elements to Kinoshita.

11. Applicant submitted that bake-hardenable cold rolled sheet as recited by the claims exhibits MnS and/or CuS precipitates having an average size of $\leq 0.2 \mu\text{m}$ which produces new and unexpected results by improving bake hardenability, formability, yield strength and yield strength-ductility balance. It is the Examiner's position that to distinguish claims over prior art, Applicant will need to demonstrate (e.g. by comparative test data) that prior art alloy does not meet precipitate limitation.

Conclusion

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deborah Yee whose telephone number is 571-272-1253. The examiner can normally be reached on monday-friday 6:00 am-2:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Deborah Yee/
Primary Examiner
Art Unit 1793

/DY/